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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,348	03/16/2001	Tom Marttila	6009-4601 US	7865

7590  
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08/29/2002

EXAMINER

HAMILTON, ISAAC N

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 08/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

S.M.

# Office Action Summary

Application No.

09/787,348

Applicant(s)

MARTTILA, TOM

Examiner

Isaac N Hamilton

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Specification***

2. The abstract is objected to due to "means" in line 4. This is considered legal phraseology and should be removed. Applicant is reminded of the proper language and format for an abstract of the disclosure below:

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 3724

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch et al. (4,647,358), hereafter Bartsch, in view of Whetstone et al. (4,109,374), hereafter Whetstone.

Regarding claim 1, Bartsch discloses a method for making a cathode shown in column 2, lines 31-60. Note cathode in figure 3; steel outer jacket 2; outer jacket is removed from at least one end in column 2, line 49-50; highly conductive inner core 3. Bartsch does not disclose a method of joining the parts of the bar by drawing, upsetting, melting or casting. However, Whetstone teaches a method of drawing to join the parts of the bar in column 9, lines 35-47. It would have been obvious to use drawing to join the parts of the bar in Bartsch as taught by Whetstone in order to provide firm contact between outer jacket and the core.

Regarding claim 2, note copper core 3.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone as applied to claims 1 and 2 above, and further in view of Kuchek (3,849,879). The combination of Bartsch and Whetstone discloses everything as noted above, but does not disclose a core of aluminum. However, Kuckek teaches a core of aluminum in column 1, lines 5-20. It would have been obvious to provide a core of aluminum in the combination in order to have an electrical conductor resistant to corrosive environments.

6. Claims 4, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone as applied to claims 1 and 2 above, and further in view of Hillmann (4,503,602). The combination discloses everything as noted, but does not disclose a method of drawing an arbor through the core preform. However, Hillman teaches a method of drawing an arbor 2 through the core perform 1. It would have been obvious to provide a method of drawing

Art Unit: 3724

an arbor through the core perform in order to create a surface of contact between the outer jacket and the inner core. Note column 1 through column 2, lines 65-2. It is obvious to use steel as an arbor because it is a material that is well-known in the art and widely available in industry. It is noted that Hillman does not disclose the removal of the arbor 2 from the inner core 1.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone as applied to claims 1 and 2 above, and further in view of Ohashi et al. (5,056,209), hereafter Ohashi. The combination of Bartsch and Whetstone discloses everything as noted above, but does not disclose a method of pressing the ends of the core perform inside the outer jacket. However, Ohashi teaches a method of pressing the ends of the core perform inside the outer jacket. It would have been obvious to provide a method of pressing the ends of the core perform inside the outer jacket in the combination as taught by Ohashi in order to prevent various defects and cracking on the surface of the outer jacket. Note column 1, lines 63-68 and column 17, lines 19-30.

8. Claims 8, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone as applied to claims 1 and 2 above, and further in view of Willingham (3,648,757). The combination discloses everything as noted above, but does not disclose a method of attaching the core to the jacket by casting it in molten form. However, Willingham teaches a method a method of attaching the core to the jacket by casting it in molten form as shown in figure 4. It would have been obvious to provide a method of attaching the core to the jacket by casting it in molten form in the combination as taught by Willingham in order to mold the core to jackets of varying shapes and sizes. Regarding claim 14, note that the jacket is held in a vertical position with the bottom end closed.

Art Unit: 3724

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone as applied to claims 1 and 2 above, and further in view of Schenk, Jr. (3,909,301). The combination discloses everything as noted above, but does not disclose a method of melting a core perform inside a jacket that remains in sufficiently solid form. However, Schenk, Jr. teaches a method of melting a core perform inside a jacket that remains in sufficiently solid form in column 18, line 45 through column 21, line 25. It would have been obvious to provide a method of melting a core perform inside a jacket that remains in sufficiently solid form in the combination as taught by Schenk, Jr. in order to use a process that requires only minimum operating temperatures.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone and Willingham as applied to claims 8, 9, and 14 above, and further in view of Balthazar et al. (3,780,555), hereafter Balthazar. The combination discloses everything as noted above, but does not disclose a method of preheating the outer jacket before bonding. However, Balthazar teaches a method of preheating the outer jacket before bonding in column 4, lines 42-44. It would have been obvious to provide a method of preheating the outer jacket before bonding in the combination as taught by Balthazar in order to cool the molten core at a controlled pace.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone and Willingham as applied to claims 8, 9, and 14 above, and further in view of Ohashi et al. (5,056,209), hereafter Ohashi. The combination teaches everything as noted above, but does not teach a method of heating the outer jacket and the core during bonding. However, Ohashi teaches a method of heating the outer jacket and the core during bonding in column 17,

Art Unit: 3724

lines 37-44. It would have been obvious to provide a method of heating the outer jacket and the core during bonding in the combination as taught by Ohashi in order to avoid any substantial fluctuation in wall thickness. Note column 4, lines 16-25.

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone and Willingham as applied to claims 8, 9, and 14 above, and further in view of Yamada et al. (JP 01180718 A), hereafter Yamada. The combination teaches everything as noted above, but does not teach a method of heating the outer jacket and the core after bonding. However, Yamada teaches a method of heating the outer jacket and the core after bonding in figure 5, elements 4 and 5. It would have been obvious to provide a method of heating the outer jacket and the core after bonding in the combination as taught by Yamada in order to contract the outer jacket to the entire length of the inner tube.

13. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone and Willingham as applied to claims 8, 9, and 14 above, and further in view of Beetle (4,807,688). The combination teaches everything as noted above, but does not teach a method of immersing an outer jacket, with holes in the upper part, into a melt of a core material essentially in a horizontal position. However, Beetle teaches a method of immersing an outer jacket 10, with holes 40 in the upper part, into a melt of a core material 60 essentially in a horizontal position in figure 5. It would have been obvious to provide a method of immersing an outer jacket, with holes in the upper part, into a melt of a core material essentially in a horizontal position in the combination as taught by Beetle in order to take advantage of the metallostatic pressure head to fill the jacket with molten metal, thus eliminating the cost for any pouring equipment. Note column 2, lines 18-37.

Art Unit: 3724

14. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartsch in view of Whetstone and Willingham as applied to claims 8, 9, and 14 above, and further in view of Dwivedi (5,005,631). The combination teaches everything as noted above, but does not teach a method of immersing an outer jacket into a melt of core material in a vertical position wherein the bottom of the jacket is closed. However, Dwivedi teaches a method of immersing an outer jacket into a melt of core metal in a vertical position wherein the bottom of the jacket is closed. It would have been obvious to provide a method of immersing an outer jacket into a melt of core metal in a vertical position wherein the bottom of the jacket is closed in the combination as taught by Dwivedi in order to fill the volume of the jacket and eliminating the cost of any equipment needed to rotate the outer jacket.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hanson et al. is cited for a molding and casting process; Winter et al. is cited for a drawing process .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac Hamilton whose telephone number is 703-305-4949. The examiner can normally be reached on Monday thru Friday between 8am and 5pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on 703-308-1082.



Allan N. Shoap  
Supervisory Patent Examiner  
Group 3700



Art Unit: 3724

In lieu of mailing, it is encouraged that all formal responses be faxed to 703-872-9302.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is 703-308-1148.

JH  
IH

August 26, 2002

  
Allan N. Shoap  
Supervisory Patent Examiner  
Group 3700